

August 9, 2011

By Electronic Filing

Ms. Marlene H. Dortch  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

**Re: WT Docket No. 11-69**

Dear Ms. Dortch:

Attached is a PowerPoint presentation developed by Nielson Communications to present the findings of the three-site Tetra pilot system currently operating in Wisconsin.

The PowerPoint presentation was developed as a means to convey the test results of the pilot and to dispel the current Tetra myths in the United States.

Nielson Communications, Inc. (NCI) has been working with Tetra equipment suppliers since early 2010. NCI has exceptional experience with Tetra equipment and the implementation of Tetra stations.

In particular, NCI would like to convey the findings of the interference testing done with the system. Keep in mind the testing was done in a real world environment, with non-laboratory grade test equipment or test procedures. Testing was performed with very limited budget and available resources.

**Interference Test Slide 1-** Measurement of baseline analog radio receiver sensitivity.

- The analog receiver sensitivity is measured without any external noise or interference present
- The baseline analog sensitivity is -118dBm for 12dB SINAD

**Interference Test Slide 2-** Measurement of Noise Floor Analog Radio Sensitivity

- The analog receiver sensitivity is measured with an external receive antenna connected to the receiver port.
- The baseline analog sensitivity with noise floor present is
  - -115dBm at 454.200MHz

- -117dBm at 454.225MHz
- -117dBm at 454.250MHz

**Interference Test Slide 3-** Measurement of Analog receiver sensitivity with Tetra transmitter present on center frequency of 454.225MHz.

- Lower adjacent channel sensitivity did not change (-115dBm)
- Upper adjacent channel sensitivity did not change (-117dBm)
- 454.225MHz channel sensitivity only was degraded by 6dB (-111dBm)

**Interference Test Slide 4-** Analog Paging Transmitter on 454.175MHz

- When performing the tests, we were required to wait until a paging transmitter on the same tower would cease transmitting as we were unable to measure sensitivity at 454.200MHz (the adjacent channel to the paging transmitter)

In summary, we were unable to find any adjacent channel interference to the analog test receiver with the TETRA transmitter operational. In fact, even the co-channel interference was far less than expected with the TETRA transmitter (only 6dB).

Bay Electronics, Inc. and Nielson Communications, Inc. support the TETRA Association's rulemaking request, and are submitting this into the record to support its position that allowing TETRA operations in the U.S., without any constraints, will not increase the risk of interference to other Part 90 users. And as seen in the testing process, may even provide less interference than what is currently deployed in the U.S.

Sincerely,  
/s/  
Rick Nielson, P.E.  
President,  
Nielson Communications  
Bay Electronics, Inc.  
23 East Oak Street  
Sturgeon Bay, WI 54235  
(920) 743-0190

Attachment